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10/031,201	06/04/2002	Denis Bertin	ATOCM 247	2638

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EXAMINER

REDDICK, MARIE L

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,201

Applicant(s)

BERTIN ET AL.

Examiner

Judy M. Reddick

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/15/02;06/04/02;08/30/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed August 30, 2002 has been considered and placed in the application file.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) The recited "(A)/(B) is between 1 and 5" per claim 1 constitutes indefinite subject matter as per the intended meaning of the "/" is not readily ascertainable. It is suggested that applicant adopt the following language: "---such that the (A)/(B) weight ratio—" so as to avoid any confusion and consistent with the originally filed claims(see claim 5).

B) The recited "0.5 to 45 parts of polypropylene (A) and of compatibilizer (B)" per claim 1 constitutes indefinite subject matter as per a) it not being readily ascertainable if the "0.5 to 45 parts" is intended to qualify "(A)", alone, or "(A) + (B)"; b) it is not readily ascertainable, from the language as claimed, as to the function of the compatibilizer, i.e., to compatibilize the "EVOH" and/or the "polypropylene component or else.

C) The recited "chosen from" per claims 7 and 10 engenders an inconsistency with proper Markush format. Use of "selected from the group consisting of" is proper and is suggested.

D) The recited "a propylene homopolymer or copolymer (B3) comprising an unsaturated monomer X, which is grafted or copolymerized, with (ii) a polyamide" per claim 8 constitutes indefinite subject matter

Art Unit: 1713

as per it not being readily ascertainable as to any rules of chemistry that would allow for said

"homopolymer" or "copolymer" to comprise "an unsaturated monomer".

E) The recited "the copolyamide"(both occurrences) per claim 10 constitutes indefinite subject matter as per the non-express establishment of proper antecedent basis.

F) The recited "wherein the (A)/(B) weight ratio is between 2 and 4" per claim 22/5 constitutes indefinite subject matter as per it not being readily ascertainable as to how such further limits the antecedently recited (A)/(B) weight ratio.

G) The recited "g/10 mn" per claim 1 is inconsistent with the dictionary abbreviation for "minute". Use of "min" is proper and is suggested.

Specification

5. The disclosure is objected to because of the following informalities: On page 17, in TABLE 1, Run 6, the value of "37.5" representing the "EVOH MFI/(A) MFI" is incorrect. According to the Examiner's calculations, it should read "7.5" and it is believed that such is an inadvertent, typographical error.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 1713

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-5, 12-14 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimo et al(U.S. 6,294,602 B1).

Shimo et al disclose a resin composition, useful in the manufacture of single and multilayered structures wherein a thermoplastic resin layer such as polypropylene homo- and copolymers can be adjacent to the layer of the composition resin composition, wherein said resin composition is defined basically as comprising (A) an ethylene-vinyl alcohol copolymer, (B) a polyamide resin, (C) an ethylene-unsaturated carboxylic acid random copolymer or its metal salt, and (D) a thermoplastic resin except the resins noted above, of which the solubility parameter (as calculated from the Fedors' formula) is not more than 11, wherein the compositional ratio by weight satisfies the following formulae (1) to (4):(1)

$0.005 \leq W(B+C)/W(T) \leq 0.995$, (2) $0.005 \leq W(B+C)/W(T) \leq 0.4$, (3) $0.01 \leq W(A)/W(A+D) \leq 0.99$

and (4) $0.02 \leq W(B)/W(B+C) \leq 0.98$ wherein, W(A) indicates the weight of (A) in the composition, W(B) indicates the weight of (B) in the composition, W(C) indicates the weight of (C) in the composition, W(D) indicates the weight of (D) in the composition and W(T) indicates the total weight of the composition.

Shimo et al, (cols. 6-9), teach that the EVOH(A) used in the composition of the invention is obtained by saponifying an ethylene-vinyl ester copolymer, and it may have an ethylene content of from 15 to 70 mol %, but preferably from 20 to 65 mol %, most preferably from 25 to 60 mol %, and a degree of saponification of the vinyl ester moiety of at least 85%, but preferably at least 90%, has a melt index at 190 degree C under a load of 2160g of from 0.1 to 50 g/10 min., but most preferably from 0.5 to 30 g/10 min. and that for EVOH having a melting point of around 190 degrees C or higher than 190, its MI is measured under a load of 2160 g at different temperatures not lower than its melting point, and the data

Art Unit: 1713

are plotted on a semi-logarithmic graph where the horizontal axis indicates the reciprocal of the absolute temperature and the vertical axis indicates the logarithm of MI, from which is extrapolated the MI of EVOH at 190 degrees C, the polyamide resin (B) used in the composition has a melt index at 210 degrees C under a load of 2160 g of from 0.1 to 50 g/10 min., but most preferably from 0.5 to 30 g/10 min. and that for the polyamide (B) having a melting point of around 210 degrees C or higher than 210 degrees C, its MI is measured under a load of 2160 g at different temperatures not lower than its melting point, and the data are plotted on a semi-logarithmic graph where the horizontal axis indicates the reciprocal of the absolute temperature and the vertical axis indicates the logarithm of MI, from which is extrapolated the MI of the polyamide at 210 degrees C, the ethylene-unsaturated carboxylic acid random copolymer or its metal salt (C) used in the composition is a copolymer as obtained through random copolymerization of ethylene and an unsaturated carboxylic acid, or its metal salt as obtained by neutralizing the carboxylic acid component of the copolymer and has a melt index(MI, at 190 degrees C, under a load of 2160 g) of from 0.05 to 50 g/10 min. and the thermoplastic resin (D) used in the composition includes, e.g., polyolefinic including alpha-olefinic homopolymers such as high-density or low-density polyethylene, polypropylene, polybutene-1, etc.; copolymers of alpha-olefins selected from ethylene, propylene, butene-1, hexene-1, etc.; and also copolymers of such alpha-olefins with any other comonomer(s) and that the thermoplastic resin (D) has a melt index (MI, at 190 degrees C under a load of 2160 g) of from 0.05 to 100 g/10 min., but more preferably from 0.05 to 50 g/10 min., most preferably from 0.5 to 30 g/10 min. and that for the resin (D) having a melting point of around 190 degrees C or higher than 190 degrees C, its MI is measured under a load of 2160 g at different temperatures not lower than its melting point, and the data are plotted on a semi-logarithmic graph where the horizontal axis indicates the reciprocal of the absolute temperature and the vertical axis indicates the logarithm of MI, from which is extrapolated the MI of the resin (D) at 190 degrees C. Shimo et al, @ col. 9, lines 30-52, also teach that the combination of the two components of the polyamide (B) and the ethylene-unsaturated carboxylic acid random copolymer or its metal salt (C) is used as the compatibilizer for compatibilizing the EVOH (A) and the thermoplastic resin (D), and the combination of the polyamide (B) and the ethylene-unsaturated carboxylic acid random copolymer or its metal salt (C) significantly

Art Unit: 1713

improves the compatibility between the EVOH (A) and the thermoplastic resin (D), thereby producing the resin composition having excellent characteristics. Shimo et al, @ the paragraph bridging cols. 11 and 12, further teach that the resin composition in which the EVOH (A) forms a matrix phase and the thermoplastic resin (D) forms a dispersed phase is advantageous in that it keeps the excellent characteristics of EVOH as a whole while additionally having the characteristics of the thermoplastic resin added thereto and, accordingly, the resin composition of this type is favorable for forming films such as mat films in which the thermoplastic resin (D) is preferably a polyolefin which includes ethylene/propylene copolymers. More specifically, Shimo et al, @ col. 16, teach that in the resin composition for mat films, the amount of thermoplastic resin (D) is preferably from 4 to 45 % by weight, based on the total weight of the components (A), (B), (C) and (D) and that the sum of the polyamide resin (B) and the ethylene-unsaturated carboxylic acid random copolymer of its metal salt (C), based on the total amount of the components (A) through (D), is from 1 to 20 % by weight. See, the Abstract, col. 1, lines 5-15, cols. 5-18(highlighted sections), the Runs and the claims of Shimo et al.

The disclosure of Shimo et al differs basically from the claimed invention as per the non-express disclosure of a single embodiment drawn to a resin composition governed by the required features of the claimed invention, in terms of ratio of polypropylene(A) to compatibilizer (B) and MFIs of EVOH to polypropylene. However, one having ordinary skill in the art would have found it obvious to extrapolate a composition , overlapping in scope with the claimed composition, from Shimo et al as per such having been within the purview of the general disclosure of Shimo et al and with a reasonable expectation of success, absent a clear showing of criticality fully commensurate in scope with the claims.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1713

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-29 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Honda et al(EP 440,557).

Honda et al disclose a resin composition, useful in the formation of single and multilayered structures wherein, said resin composition is defined basically as containing 50 to 99.5 wt.% of (A) a saponified copolymer of ethylene and vinyl acetate(EVOH) governed by a melt flow index(MI @ 210 degrees C under a load of 2160 g) of 0.5 to 100 g/10 min. and preferably 1 to 60 g/10 min., 0.4 to 50 wt.% of (B) a polyolefin resin governed by a melt flow index(MI @ 210 degrees C under a load of 2160 g/10 min.) of 0.01 to 100 g/10 min. and includes a copolymer of ethylene-propylene, a crystalline polypropylene copolymer, etc., 0.1 to 15 wt.% of(C) a graft copolymer obtained by a) grafting an ethylenically unsaturated carboxylic acid or derivative onto a polyolefin resin, and then b) reacting the product with a polyamide oligomer and 0.005 to 5 parts per hundred of (A + B + C) of(D) a hydrotalcite. See, the Abstract, page 2, lines 41-54, page 3, lines 1-58, pages 4-6 and the Runs, in particular Run 7 of Honda et al which exemplifies a composition containing 85 wt. % of EVOH(E3), 10 wt.% of polypropylene(P1) and 5 wt.% of graft copolymer(G1), compatibilizer, wherein the contents of polypropylene and graft copolymer(compatibilizer) are such that the ratio of polypropylene/graft copolymer is 2 and the ratio of the MFI of the EVOH to the MFI of polypropylene is 5. To this end, Honda et al therefore anticipate the instantly claimed invention with the understanding that one of ordinary skill in the art would have readily envisioned the use of a polypropylene governed by a MI sufficient meet the claimed ratio of MFI of EVOH to MFI of polypropylene, i.e., greater than 5, in lieu of the polypropylene per the Run 7, based on their identified equivalent scope(page 3, lines 29-30 of Honda).

Art Unit: 1713

As to the dependent claims, the limitations are either taught by Honda et al, suggested by Honda et al or would have been obvious to the skilled artisan and with a reasonable expectation of success.

Even if it turns out that the Examiner has somehow missed the boat and the claims are not anticipated, one having ordinary skill in the art would have found it obvious to extrapolate the precisely defined composition, as claimed, from Honda et al as per such having been within the purview of the Honda's general disclosure and with a reasonable expectation of success.


Conclusion


13. The additional prior art listed on the attached FORM PTO 892 is cited as of being illustrative of the general state of the art. Further, the Document EP 440,559 to Asano et al and cited by applicant on the PTO FORM 1449, paper no. 6, 08/30/02 is acknowledged and a rejection based on the Runs, viz. 1-3, 5 and 6 is not being made over the invention, as claimed, since it is clear from the Abstract and at least on page 2, lines 31-43 that this is a typographical error and that the E/P/G should read P/E/G and, to this end, Asano et al neither anticipates nor renders obvious the instantly claimed invention. If the Examiner has somehow missed the boat with respect to tabulated data, and this was not a typographical error, a rejection in the future, based on Asano et al, may be made.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judy M. Reddick whose telephone number is (703)308-4346. The examiner can normally be reached on Monday-Friday, 6:30 a.m.-3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-8183.


Judy M. Reddick
Primary Examiner
Art Unit 1713

JMR 
9.5.03